AMENDMENTS TO THE CLAIMS

Please cancel claims 1, 3 and 11-15.

Please amend claims 2 and 4-10.

Please add new claims 22-23.

Listing of Claims

1. (Canceled)

2. (Currently Amended) The system according to ~~claim 1~~ claim 16 comprising at least one illumination source.

3. (Canceled)

4. (Currently Amended) The system according to ~~claim 3~~ claim 17 wherein the ~~sampling~~ chamber is at least partially transparent.

5. (Currently Amended) The system according to ~~claim 3~~ claim 17 wherein the imaging system is configured for imaging the chamber.

6. (Currently Amended) The system according to ~~claim 1~~ claim 16 wherein the imaging system is configured for imaging a body lumen.

7. (Currently Amended) The system according to ~~claim 1~~ claim 16 wherein the agglutinative particles include at least one molecule selected from the group consisting of: antibodies, antigens, cells ~~or~~ and linkers.

8. (Currently Amended) The system according to ~~claim 3~~ claim 17 wherein the at least one analyte is in the in vivo sample.

9. (Currently Amended) The system according to ~~claim 1~~ claim 16 wherein the optical change is selected from the group consisting of: a change of color, a change of hue, a change of brightness, a change of intensity, a change of optical density, a change of transparency, a change of light scattering ~~or~~ and any combination thereof.

10. (Currently Amended) The system according to ~~claim 1~~ claim 16 wherein the in vivo imaging system includes at least a photodiode, a CCD or a CMOS.

11-15. (Canceled)

16. (Currently Amended) An ingestible capsule comprising:

an optical window, said window having immobilized thereto agglutinative particles capable of interacting with at least one analyte and further capable of gathering into agglutination groups so as to cause an optical change;

at least one imaging system configured for detecting at least the optical change; and

a transmitter configured for transmitting image data to an external receiving system.

17. (Original) The device according to claim 16 comprising at least one chamber, said chamber configured for containing the agglutinative particles and an in vivo sample.

18. (Currently Amended) A method for in vivo analysis, the method comprising the steps of:

obtaining a sample from a body lumen;

combining in vivo the sample with agglutinative particles such that the combined sample and agglutinative particles gather into agglutination groups; and

detecting at least one optical change in the combined sample and agglutinative particles.

19. (Original) The method according to claim 18 wherein the step of detecting at least one optical change includes imaging the combined sample.

20. (Original) The method according to claim 18 comprising the step of obtaining at least one image of the body lumen.

21. (Previously Presented) The method according to claim 18 comprising transmitting data to an external receiving unit.

22. (New) The method according to claim 18 further comprising the step of ingesting a capsule comprising agglutinative particles.

23. (New) The method according to claim 18 further comprising the step of identifying a location of the combined sample within the body lumen.